

REMARKS

Claims 14-26 are now present in this application with claims 1-4 and 9-13 being cancelled without prejudice or disclaimer of the subject matter contained therein, with claim 14 being amended by the present amendment, and with new claims 23-26 being added by the present amendment. Claim 14 is the sole remaining independent claim in connection with the present application.

Prior Art Rejection

The Examiner has rejected claims 1-4 and 9-22 under 35 U.S.C. § 103 as being unpatentable over Matthews et al. (the Matthews '063 patent) in view of Mochiduki et al. (the Mochiduki '973 patent). This rejection is respectfully traversed.

Based upon the Examiner's final rejection and further based upon the Examiner's Advisory Action issued on May 12, 2003, the Examiner essentially agrees with the Applicants by admitting that the prior art Matthews '063 patent fails to teach or suggest at least the limitation of "wherein in at least one of the pair of sealing portions is provided with at least one constricted portion which is formed in an area between an end of the electrode and an end of the external lead, and ..." as is now claimed in claim 14 of the present application.

In the Matthews '063 patent, the constricted portion as shown in Fig. 2 for example, is formed in the portion of the electrode 20 or 22 and in the portion of the external lead 28 (see Fig. 2 for example). As such, the Matthews '063 patent cannot achieve certain functions which are achievable by the present invention as claimed in claim 14 including, but not limited to, avoiding

example) and having a constricted portion which acts as portion for stopping gap proceeding (see page 17, lines 5-8 of the present specification for example).

Limitations Not Taught Even If Combination Could Be Made

In an attempt to make up for the aforementioned deficiency of independent claim 14, for example, the Examiner attempts to combine the teachings of the Matthews '063 patent with those of the Mochiduki '973 patent, and specifically with alleged constricted portions adjacent elements 16A and 16B of Fig. 5 of the Mochiduki '973 patent. Applicants respectfully traverse this assertion for the following reasons.

Initially, with regard to the Mochiduki '973 patent, the sealing portion of the metal foil is formed by a pinch seal as shown in Fig. 5 and as discussed in column 4, lines 54-61 of the Mochiduki '973 patent. Applicants respectfully submit that this is different from the shrink seal structure as claimed in claim 14 of the present invention. According to the present application, in the production of a sealing portion including a shrink seal structure, since self-cooling is performed after the glass tube is heated and sealed, the residual stress is prevented from occurring in the glass portion of the sealing portion, and thus the resistance to sealing pressure can be improved (see page 14, lines 17-page 15, line 2 of the present application for example). On the other hand, according to the pinch seal of the Mochiduki '973 patent, since the die of the metal and the like is pinched and sealed in the heated sealing portion, a residual stress generally occurs in the resistance to sealing pressure and cannot be improved.

Accordingly, Applicants respectfully submit, that the alleged combination of references, even assuming *arguendo* that they could be combined, fail to teach or suggest at least the

the part of sealing portions is provided with at least one constricted portion which is formed in an

area between an end of the electrode and an end of the external lead. Even assuming *arguendo* that the Mochiduki '973 and Matthews '063 patents could be combined, which Applicants do not admit, at least such limitations are not taught or suggested by the alleged combined structure. Accordingly, withdrawal of the outstanding rejection and allowance of independent claim 14, and all claims dependent thereon, is earnestly solicited.

Dependent Claim Limitations Not Taught By Alleged Reference Combination

In addition, the alleged combination of the Mochiduki '973 and Matthews '063 patents further fail to teach or suggest various ones of the limitations present in the various dependent claims of the present application. For example, with regard to claim 19, this claim sets forth that a plurality of constricted portions are formed on the sealing portion. This is supported, for example, by at least Figs. 1A and 1B of the present application, wherein multiple constricted portions 26 are shown within the sealing portion 20'. At best, only a single constricted portion is shown in each of the Matthews '063 and Mochiduki '973 patents. Thus, for at least such reasons, claim 19 is allowable over the alleged combination of references.

New claims 23-26 have been added, wherein the various limitations present therein are clearly not taught or suggested by any of the Matthews '063 and Mochiduki '973 patents, taken either singularly or in combination. For example, as set forth in claim 26, the at least one constricted portion is only formed in an area between an end of the electrode and an end of the external lead. At least such a limitation is not taught or suggested by either of the Mochiduki '973 and Matthews '063 patents, taken either singularly or in combination. Accordingly, for at least such reasons, each of the various dependent claims of the present application is also

LACK OF MOTIVATION TO MAKE COMBINATION

The Court of Appeals for the Federal Circuit has set forth very rigorous requirements for establishing a *prima facie* case of obviousness under 35 U.S.C. §103. To establish obviousness based upon a combination of elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the Applicants. The motivation, suggestion, or teaching may come explicitly from the statements in the prior art, the knowledge of one of ordinary skill in the art, or in some cases, the nature of the problem to be solved. See *In re Dembiczak*, 50 USPQ2d 1614 (Fed. Cir. 1999) and *In re Kotzab*, 55 USPQ 1313 (Fed. Cir. 2000). In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103, the Examiner must provide particular findings as to why the two pieces of prior art are combinable. Broad conclusory statements standing alone are not "evidence". See, *In re Dembiczak*, 50 USPQ2d at 1617.

Matthews Provides No Motivation

As admitted by the Examiner, the Matthews '063 patent clearly fails to teach or suggest "... at least one constricted portion which is formed in an area between an end of an electrode and the end of a lead" as set forth in claim 14. In the Matthews '063 patent, the particular configuration envelope includes a first envelope portion surrounding the foil member 30, as shown in Fig. 1 and as discussed in col. 2, lines 17-21. In col. 3, lines 29-41, it further teaches how a portion of the lamp 16 or 18, surrounding the foil member, is heated until the quartz is

portion surrounding said foil member". Accordingly, it is clear from the Matthews '063 patent

that the bulb is processed so as to surround the foil member and not to provide at least one constricted portion ... between an end of an electrode and an end of a lead as claimed in claim 14. Therefore, there is clearly no teaching or suggestion in the Matthews '063 patent for providing such a constricted portion in an area to where the metal foil is disposed.

No Motivation In Mochiduki

The Mochiduki '973 patent is directed to an electric discharge lamp apparatus, wherein a predetermined gap S2 is provided between an insulating sleeve 38 and a lead support as shown in Fig. 5 of the device. This gap, and a bend in element 36A as shown in Fig. 5, are clearly stressed as the inventive aspects of the Mochiduki '973 patent (see col. 7, lines 57-65 for example, as well as col. 10, lines 18-24). Further, claim 1 of the Mochiduki '973 patent includes the limitation of the metal lead support including a bent portion.

Regarding Fig. 5 of the Mochiduki '973 patent, Fig. 5 of the application arguably shows a varied portion of the lamp around foil members 16A and 16B. However, there is no explanation as to how or why these varied portions exist, let alone what function they serve. In fact, the portions are not even labeled nor are they ever mentioned as "constricted portions". In Fig. 1, 2 and 7, and thus in each of the figures of the application except for Fig. 5, such an alleged "constricted portion" is not even shown. At best, this is a type of pinch seal and not a shrink seal as claimed in claim 14.

Applicants respectfully submit that as the alleged "constricted portion" of the Mochiduki '973 patent allegedly shown in Fig. 5 is not even explained or acknowledged, then the Mochiduki '973 patent clearly cannot provide any motivation for applying this alleged teaching

motivation that could be gleaned by one of ordinary skill in the art from the Mochiduki

patent which would lead one to modify the structure of the Matthews '063 patent so as to include at least one constricted portion in an area between an end of the electrode and an end of the external lead as claimed in claim 14.

Use Of Applicants' Invention In Hindsight

Applicants respectfully submit that the Examiner has merely utilized Applicants' invention, in hindsight, to combine the teachings of the two references. Absent Applicants' invention, there is clearly no proper teaching, suggestion or motivation which would lead one of ordinary skill in the art to combine the alleged constricted portions of the Mochiduki '973 patent (even assuming *arguendo* that they actually exist, which Applicants do not admit), with the teachings of the Matthews '063 patent.

In the background of the present application, Applicants state, on page 4 for example, that the inventors of the present application found that the lifetime of the conventional lamp was shortened by the fact that certain gaps existed in the lamp which caused an internal stress between a foil 124 and a glass portion 122 as shown in Figs. 9A and 9B of the application. Further, on page 8 of the present application, Applicants state that they discovered that by including at least one constricted portion in an area of the metal foil for example, internal stress from the metal foil in the constricted portion could be relatively larger than that in other portions. As such, the metal foil could be deformed (thermally expanded) selectively in the constricted portion and as a result, the metal foil and the constricted portion could stop the gas from proceeding in the sealing portion. Thus, the sealing structure (and the lamp) could be maintained

Thus, it is clearly Applicants who have discovered the advantages of including a constricted portion as claimed in claim 14. Further, it is clearly Applicants' motivation which has been utilized by the Examiner, in hindsight, to combine the teachings of the prior art.

Conclusory Statements Are Not Evidence Of Motivation

When patentability turns on the question of obviousness, the search for an analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness. See *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002), citing, *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 60 USPQ2d 1001, 1008 (Fed. Cir. 2001). The factual inquiry of whether to combine references must be thorough when searching and it must be based on suggestive evidence of record. The Examiner's conclusory statements do not adequately address the issue of motivation to combine. See *In re Sang-Su Lee*, at 1443. When reviewing the patents and other objective evidence of record, it is clear that nothing in the record provides any teaching or suggestion or motivation to combine the teachings of the two patents, even assuming *arguendo* that the teaching of the constricted portion in the area between an end of the electrode and an end of the external lead of at least one of the sealing portions, is even present in the Mochiduki '973 patent (which Applicants do not admit).

Applicants respectfully submit that the Examiner has merely set forth conclusory statements as alleged motivation for combining teaching of the references. The Examiner alleges that it would have been obvious to one of ordinary skill in the art to have formed the constricted

005 patent for the purpose of tightly sealing the sealing portion in the vicinity of the internal

thereby ensuring good contact therein". The Examiner has not provided any source for this conclusory statement, and has merely utilized Applicants' motivation, in hindsight, which is clearly an improper use of hindsight and is similarly merely conclusory in nature and thus is not proper.

No Prima Facie Case Of Obviousness

Accordingly, Applicants respectfully submit that the Examiner has not established a proper *prima facie* case of obviousness because the Examiner has not provided proper motivation for combining the references. Accordingly, withdrawal of the rejection and allowance of each of the claims in connection with the present application is earnestly solicited.

Teaching Away

Further, Applicants respectfully submit that since the Matthews '063 patent emphasizes, throughout the patent, that the foil member should be surrounded, the application of at least one constricted portion in an area between an electrode and an external lead (around the foil member) as alleged by the Examiner would be actually a teaching away from the combination of references. In other words, not only does the Matthews '063 patent not provide any teaching, suggestion or motivation for including any constricted portions in such an area, but the inclusion of any such constricted portions would actually destroy the teachings of the Matthews '063 patent and thus would teach away from the alleged combination of the Matthews '063 patent and the Mochiduki '973 patent. Such a teaching away is an even further extension of the lack of motivation argument which even further suggests that the Examiner has failed to establish a

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of all outstanding objections and rejections and allowance of claims 14-26 in connection with the present application is earnestly solicited.

In the event that any matters remain at issue in the application, the Examiner is invited to contact the undersigned at (703) 668-8000 in the Northern Virginia area, for the purpose of a telephonic interview.


Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) hereby petition(s) for a three (3) month extension of time for filing a reply to the outstanding Office Action and submit the required \$820.00 extension fee herewith (a one month extension was previously paid).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Very truly yours,

HARNESS, DICKEY & PIERCE, P.L.C.

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